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<b>(21) International Application Number:</b> PCT/CA99/00073 <b>(22) International Filing Date:</b> 5 February 1999 (05.02.99) <b>(30) Priority Data:</b> 9802413.6      5 February 1998 (05.02.98)      GB <b>(71) Applicant (for all designated States except US):</b> FLEXI-COIL LTD. [CA/CA]; 1000 - 71st Street East, P.O. Box 1928, Saskatoon, Saskatchewan S7K 3S5 (CA). <b>(72) Inventors; and</b> <b>(75) Inventors/Applicants (for US only):</b> SUMMACH, Terry, Emerson [CA/CA]; 313 Capilano Place, Saskatoon, Saskatchewan S7K 4J7 (CA). SUMMACH, Bradley, T. [CA/CA]; 411 Chotem Rise, Saskatoon, Saskatchewan S7N 4M4 (CA). <b>(74) Agent:</b> ASQUITH, Anthony; 173 Westvale Drive, Waterloo, Ontario N2T 1B7 (CA).		<b>(81) Designated States:</b> AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).  <b>Published</b> <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>	
<b>(54) Title:</b> MINIMUM TILL SEEDING KNIFE			
<b>(57) Abstract</b> <p>The present invention relates to a knife for and a method of zero till or minimum till seeding and fertilizing. The knife is particularly adapted for dry land conditions producing minimum soil disturbance and very shallow operation. The knife has a high penetration angle preferably of 45 degrees which permits the blade to enter high trash surface cover with little tendency to plug due to trash accumulation. The blade has a forward angle of attack, the lower cutting edge advancing before the upper cutting edge, serving to make a clean cut in the soil surface without accumulating trash. Seed and/or fertilizer conduits are attached to or incorporated in the trailing face of the blade on which the outlets may be spaced for controlled placement of the materials. By the method a furrow is cut having a substantial transverse component in an operation with a substantial forward components. A preferred embodiment includes a horizontal extension blade for cutting a horizontal swath at a shallow depth through weed growth. Conduits may be secured to the extension to allow greater separation and control of material placement. The knives may be arranged in overlapping configuration on the draw bar to effect weed cutting, seeding and fertilizing of a complete width of soil in a single pass.</p>			

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